

# THE DER WEEKLY

[www.eren.doe.gov/der](http://www.eren.doe.gov/der)

Vol. 2 No. 29

July 20, 2001

## Industry News

### DTE Orders 100 Pratt & Whitney Turbines

DTE Energy Technologies announced that its testing on Pratt & Whitney's ST5 turbine was successful and that it has ordered 100 of the units to be marketed as part of its *energy/now*™ ENT 400 product. According to DTE, at 400 kW the ST5 is the largest gas turbine ever built with air bearings and was tested for distributed generation applications for small- to medium-sized commercial customers and for microgrids serving residential and commercial development projects. Commercial units are expected to be available beginning in early 2002.

*DTE Energy Technologies Press Release and Reuters, July 13*



### CECA Distributed Energy Forum Report

On July 18, the Consumer Energy Council of America (CECA) Distributed Energy Forum released its report on distributed energy (DE) after one year of in-depth study and review. Participants in the forum represented investor-owned utilities, public power systems, and rural electric cooperatives and included senior officials at the Department of Energy, chairs of state public utility commissions, and consumer and environmental leaders. The Forum makes recommendations in the report to address challenges that must be addressed before DE can realize its full potential within the U.S. electric power infrastructure. The full CECA DE Forum Report is available on CECA's Web site at [cecarf.org](http://cecarf.org).

### American Superconductor Builds New Motor

American Superconductor Corporation announced that it has built and demonstrated a 5,000-horsepower high temperature superconductor electric motor. It was designed to reduce manufacturing costs of industrial and ship propulsion motors by up to 40 percent compared with conventional motors. The HTS electric motor offers significant fuel savings and lower operating costs. It is about the size of a household refrigerator and its net electrical losses are up to half the electrical losses of a conventional motor.

*American Superconductor Corp.*

*Press Release, July 18; Photo: [amsuper.com/5000htsmotor.htm](http://amsuper.com/5000htsmotor.htm)*



Outages and power quality events cost the U.S. billions of dollars per year!  
Read Power Crunch — The DER Weekly feature on page 2.

### AEP Expands Texas Wind Project

American Electric Power (AEP), a Columbus, Ohio-based electricity generator, plans to expand the Trent Mesa wind power project in Texas by 20,000 kW. AEP will build, own, and operate the plant, and TXU Corporation, a natural gas and electric service provider, will buy the electricity output. The expansion will add 13 wind turbines to the 87 turbines already being installed at the site, bringing AEP's total investment in the project up to about \$160 million. The company estimates that the facility will generate more than 590 million kWh of electricity and that delivery of the energy to TXU will begin this fall.

*Reuters News Service, July 20; AEP Press Release, July 18*

## Policy News

### Senate Holds Hearing on DER and RE Barriers

On July 19 the Senate Committee on Energy and Natural Resources held a full committee hearing on proposals related to removing barriers to distributed generation, renewable energy, and other advanced technologies in electricity generation and transmission. DOE Assistant Secretary David Garman provided testimony and answered questions from committee members. Mr. Garman stated during his testimony that the Department supports establishing interconnection standards so they may provide guidance to state utility regulators, and in response to a later question about interconnection he stated that the Federal government needs to be careful and not undo state efforts already underway. Answering Senator Chuck Hagel's (R-NE) question regarding the long-term potential for renewable energy, Mr. Garman said that the potential for renewable energy cannot be understood until we address interconnection and net metering issues. Mr. Garman's written testimony is located at [senate.gov/~energy](http://senate.gov/~energy).

### Energy Tax Policy Act of 2001 Introduced

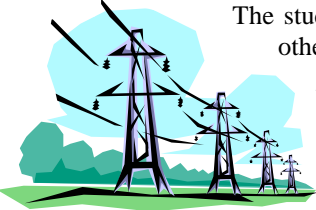
The Energy Tax Policy Act of 2001 (H.R. 2511) was introduced in the House Ways and Means Committee on

*(Continued on page 2)*

## Power Crunch: The DER Weekly Feature

### Outages, Power Quality Events, Voltage Sags and Surges, Oh My!

A Business Week article, back in 1991, stated that power-related problems cost U.S. companies \$26 billion a year in lost time and revenues. This was just an approximate figure; several other estimates have assessed the monetary damage caused by outages, voltage spikes, and sags at \$30 - 150 billion. A recent EPRI-sponsored study put the figure at over \$119 billion.



The study concluded that digital economy and industrial firms lost \$45.7 billion annually to outages and another \$6.7 billion to power quality disturbances. Also reported was that across all business sectors, and not just these power sensitive ones, the U.S. economy is losing between \$129 and \$188 billion a year to outages and power quality phenomena. The findings of the report underscore the economy's burgeoning reliance on power quality and reliability.

According to the report, three sectors of the U.S. economy are particularly sensitive to power disturbances including the digital economy, continuous process manufacturing, and fabrications and essential services. Though these sectors only account for roughly 17 percent of U.S. businesses, they comprise approximately 40 percent of U.S. gross domestic product.

The report extrapolated data from 985 representative establishments to reflect the costs of approximately 2 million industrial and digital economy companies. For each company an individual who was knowledgeable about the effects of power disturbances and the facilities energy consumption completed the survey. The respondents were presented with a set of outage scenarios and asked to estimate the costs for several categories.

EPRI said the states losing the most from energy disruptions and disturbances were California, ranging from \$13.2 billion to \$20.4 billion without rolling blackouts; Texas, \$8.3 billion to \$13.2 billion; and New York, \$8 billion to \$12.6 billion.

*Business Week April 8, 1991; PRNewswire, July 18; [Primen Executive Summary](#) June 29, 2001*

July 17 and includes provisions for tax credits on renewable energy and distributed energy resources property. The proposed legislation would provide tax credits for residential solar energy systems, biomass and landfill gas facilities, combined heat and power plants, load management devices, and fuel cells. The U.S. Combined Heat and Power Association (USCHPA) would like to see improvements made to section 113 of the bill; these suggestions, as well as the full text of the legislation, are on the USCHPA Web site at [nemw.org/uschpa/legislationCHP.htm](http://nemw.org/uschpa/legislationCHP.htm).

### Energy Research and Technology Bill

Congressman Sherwood Boehlert (R-NY) introduced the Comprehensive Energy Research and Technology Act of 2001 (H.R. 2460) on July 11. This bill would authorize appropriations for research and development on distributed energy resources, hydrogen, bioenergy, and fuel cells.

### Energy Security Act

On July 10 Congressman James Hansen (R-UT) introduced the Energy Security Act (H.R. 2436). This bill would require Federal agencies to review regulations to eliminate barriers to emerging energy technologies such as fuel cells, combined heat and power, and distributed generation. It also includes a section dedicated to geothermal energy development.

## DOE News

### Secretary Abraham Speech Focuses on DER

On July 19 Secretary Abraham addressed the San Francisco Bay Area Council and offered solutions to California's, as well as the rest of the nation's, energy challenges. The Secretary focused on distributed energy resources as part of this solution, stating that:

- the U.S. needs investment in electronic controls, switchgears, inverters, and rectifiers;
- net metering would allow customers to reap the benefits of their own efficiency by selling excess power into the grid;
- distributed energy would increase reliability and energy efficiency;
- hydrogen may serve as the backbone of distributed energy systems, and the use of hydrogen offers the possibility of completely clean energy;
- superconductivity would allow the U.S. to more efficiently transmit power over long distances; and
- promoting the expansion of combined heat and power would dramatically increase efficiency.

The full text of the speech is located at [www.energy.gov/HQPress/releases01/julpr/pr01119.htm](http://www.energy.gov/HQPress/releases01/julpr/pr01119.htm).

# Calendar of Events

## JULY 2001

23-24	Managing Electric Power Through Deregulation	Sacramento, CA	<a href="http://www.nigi.com">www.nigi.com</a>
24-27	ACEEE Summer Study	Tarrytown, NY	<a href="http://www.aceee.org">www.aceee.org</a> ; Rebecca Lunetta; 302-292-3966
30 - Aug. 1	Green Power Conference	Portland, OR	Tina Kaarsberg, <a href="mailto:tina.kaarsberg@ee.doe.gov">tina.kaarsberg@ee.doe.gov</a> ; <a href="mailto:megan_maguire@nrel.gov">megan_maguire@nrel.gov</a>

## AUGUST 2001

7-8	Natural Gas/Renewable Energy Hybrids Workshop	Morgantown, WV	<a href="mailto:joan.barbish@netl.gov">joan.barbish@netl.gov</a>
11-15	NCSL Annual Meeting and Exhibition	San Antonio, TX	<a href="http://www.ncsl.org">www.ncsl.org</a>
21-22	Natural Gas/Renewable Energy Hybrids Workshop	Golden, CO	<a href="mailto:barbara_ferris@nrel.gov">barbara_ferris@nrel.gov</a>
21-24	International Energy Program Evaluation Conference	Salt Lake City, UT	608-835-6880; <a href="mailto:marymcc@tds.net">marymcc@tds.net</a>
29-30	Integrated Energy Efficiency Conference and Facilities Management & Maintenance Expo	Cleveland, OH	<a href="http://www.aeecenter.org">www.aeecenter.org</a>
29-Sep. 3	IEEC Integrated Energy Efficiency Congress	Cleveland, OH	Sponsored in part by FEMP; <a href="http://www.aeecenter.org">www.aeecenter.org</a>

## SEPTEMBER 2001

9-12	MicroGeneration to PowerParks: Supply options and regulatory challenges for RE and DG techs.	Troy, MI	Great Lakes Renewable Energy Assn. <a href="http://www.glrea.org">www.glrea.org</a>
9-14	6th International Conference on Carbon Dioxide Utilization	Breckenridge, CO	Barbara Ferris, 303-275-3781; <a href="http://www.nrel.gov/iccdvui/">www.nrel.gov/iccdvui/</a>
10-11	Energy Trading in the New Economy	New Orleans, LA	<a href="http://www.eyeforeenergy.com/eeo2">www.eyeforeenergy.com/eeo2</a>
10-12	Electricity Transmission 2001	Arlington, VA	<a href="http://www.iir-ny.com">www.iir-ny.com</a>
11-13	7th Grove Fuel Cell Symposium	London, UK	<a href="http://www.grovetfuelcell.com">www.grovetfuelcell.com</a>
16-19	NASEO Annual Meeting	Portland, ME	<a href="http://www.naseo.org/events/annual/default.htm">www.naseo.org/events/annual/default.htm</a>
17-21	Fifth Biomass Conference of the Americas	Orlando, FL	<a href="http://www.fsec.ucf.edu/bioam">www.fsec.ucf.edu/bioam</a> ; <a href="mailto:dee_scheaffer@nrel.gov">dee_scheaffer@nrel.gov</a>
24-26	Powering the Future—New Strategies and Solutions for Deploying Distributed Power in the Marketplace	Chicago, IL	<a href="http://www.intertechusa.com">www.intertechusa.com</a>
30 – Oct. 5	UPEX'01: The Photovoltaic Experience Conference & Exhibition	Sacramento, CA	<a href="mailto:Jjudd@ttcorp.com">Jjudd@ttcorp.com</a> ; hosted by Sacramento Municipal Utility District; includes distributed energy technologies workshop

# Calendar of Events

## OCTOBER 2001

2-3	Midwest Electrical Conf. and Expo	Indianapolis, IN	<a href="http://www.electriceagueindiana.org/expo2001/index.htm">www.electriceagueindiana.org/expo2001/index.htm</a>
14-17	National Center for Photovoltaics Program Review	Lakewood, CO	barbara_ferris@nrel.gov, 303-275-3781
16-17	Two-day Seminar on Materials for Corrosive Applications	Wilmington, DE	Rick Sutherlin, (541) 967-6924
24-26	World Energy Engineering Congress	Atlanta, GA	<a href="http://www.agcc.org">www.agcc.org</a> (includes CHP Expo <a href="http://www.aeecenter.org">www.aeecenter.org</a> )
24-27	Excellence in Building 2001	Orlando, FL	<a href="http://www.eeba.org/conference">www.eeba.org/conference</a>
28-Nov. 2	2001 IEEE/PES Transmission and Distribution Conference and Expo	Atlanta, GA	<a href="http://www.ieeet-d.org">www.ieeet-d.org</a>

## NOVEMBER 2001

1-4	World Congress for a Hydrogen Economy	Denver, CO	<a href="http://www.hydrogennow.org">www.hydrogennow.org</a>
7-9	NAESCO 18th Annual Conference	Miami, FL	<a href="http://www.naesco.org">www.naesco.org</a>
11-14	113th NARUC Annual Convention	Philadelphia, PA	<a href="http://www.naruc.org">www.naruc.org</a>
12-14	Fuel Cells for Stationary, Automotive and Portable Apps.	Fort Lauderdale, FL	Florida Educational Seminars, (561) 367-0193

## DECEMBER 2001

11-13	Power-Gen International	Las Vegas, NV	<a href="http://www.pennwellevents.com">www.pennwellevents.com</a>
-------	-------------------------	---------------	--

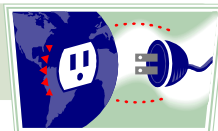
## FEBRUARY 2002

27-March 1	DistribuTECH	Miami Beach, FL	<a href="http://www.pennwellevents.com">www.pennwellevents.com</a>
------------	--------------	-----------------	--

## MARCH 2002

17-21	EPRI's 7th Distributed Resources Conference and Expo	Dallas, TX	lgoldie@epri.com
19-21	Electric Power 2002	St. Louis, MO	<a href="http://www.electricpowerexpo.com">www.electricpowerexpo.com</a>

## What's on the Web



The Hydrogen Fuel Cell Institute has launched a new website located at [h2fuelcells.org](http://h2fuelcells.org). The site features current news, stock prices, the Wilderhill Fuel Cell Index (updated four times per hour), and original commentary. The Web site will also provide a comprehensive catalog of hydrogen and fuel cell products as they begin coming to the market.

## By the Numbers

### Californians Hitting Utility Savings Targets

- 39.4 percent of San Diego Gas & Electric customers billed so far who have met their 15% savings target that entitles them to a refund
- 29 percent of Pacific Gas & Electric and Southern California Edison customers who have met their 20% savings target that entitles them to a refund

Source: [Reuters News Service](#), July 18